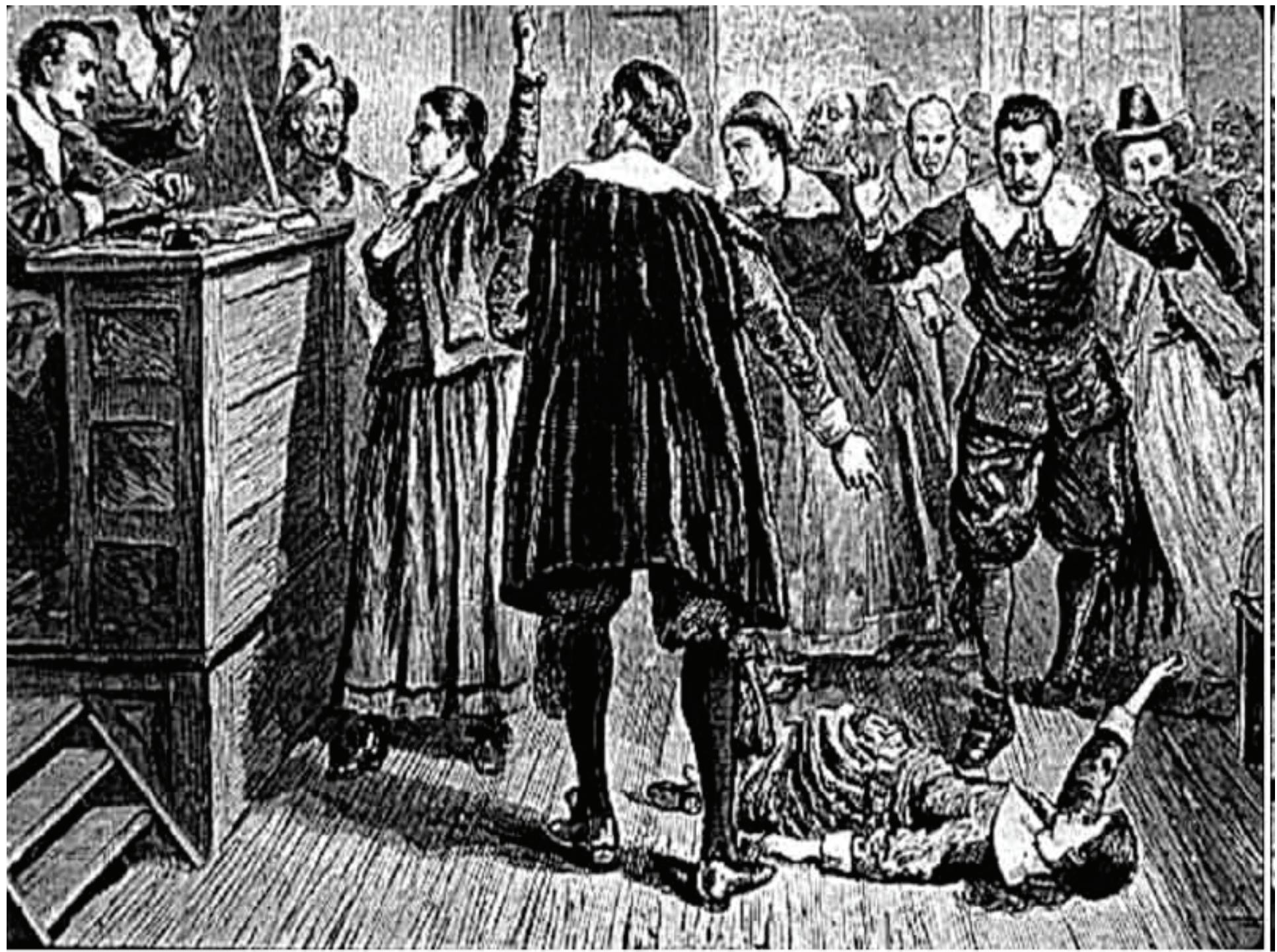




*Impression Evidence
and Standards*

Professor Jules Epstein
Indigent Defense Symposium
February, 2010



A “Game Changer”

STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES

A. Frank Prewitt

Forensic Science

“Individualization”



- With the exception of...DNA, no forensic method has been rigorously shown to have the capacity to consistently, and with a high degree of certainty, demonstrate a connection between evidence and a specific individual or source.

What Does it All Mean?



In a Daubert Jurisdiction



Forensics – Reinventing the Wheel?



- Valenti could not testify that ballistics was a "science," nor...that he reached his conclusions to any degree of "certainty," whether "ballistic certainty" or otherwise...

Forensics – Reinventing the Wheel?



- [H]owever,...he could give an opinion that it was at least "more likely than not" that the bullet and casings came from the guns in question.

In a Frye Jurisdiction



Frye-Kelly test

- Before a scientific principle can be presented to a jury, “*the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.*”

Frye v. United States, 293 F. 1013 (D.C. App. 1923).

Questions

- Is there no revisiting a ‘science’ once it has *Frye* approval?
- Are there “scientists” in these fields?

Questions?

- General Acceptance by *whom*?
- Other fingerprint experts?
- Forensic science researchers?

NAS Conclusions & Frye

- The report approvingly cites a decision out of Baltimore where a trial judge, following the Frye standard, granted a defense motion to preclude evidence of fingerprint individualization.
- The opinion “went into considerable detail about the lack of error rates, lack of research, and potential for bias” in fingerprint evidence.

Frye-Kelly: Changing science

- Armstead v. State, 342 Md. 38 (1996)
 (“due process considerations require trial court to act, as guided by legal precedent, when science reveals that previously accepted methods are not reliable”)
- Ramirez v. State, 810 So. 2d 836 (Fla. 2001).

Litigation Issues



- *Ake* - \$
- New *Frye* hearings
- Motions *in limine* – 403
- Motions *in limine* – Due Process
- Motions *in limine* – 8th Amendment

Litigation Issues



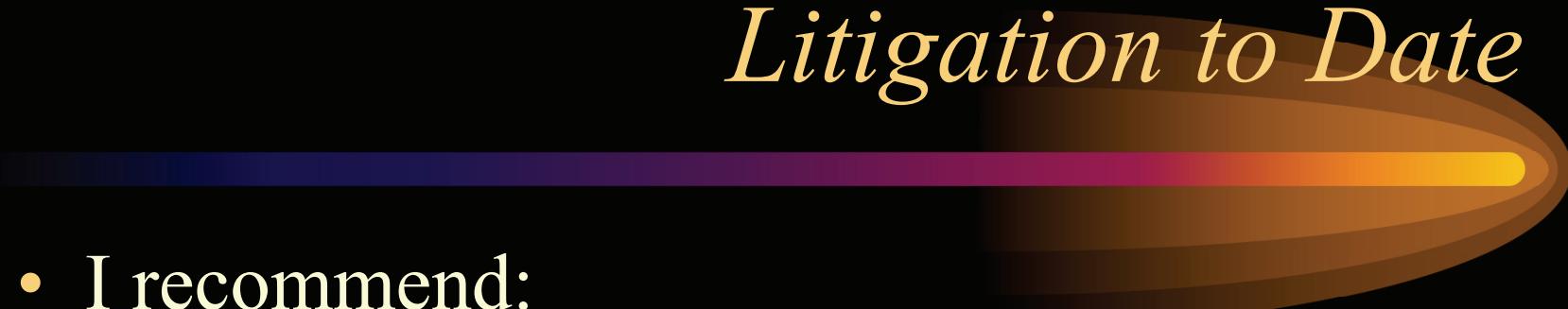
- Motions *in Limine* – scope
 - Similarities, not a match
 - No testimony “to a reasonable degree of scientific certainty”

Litigation Issues



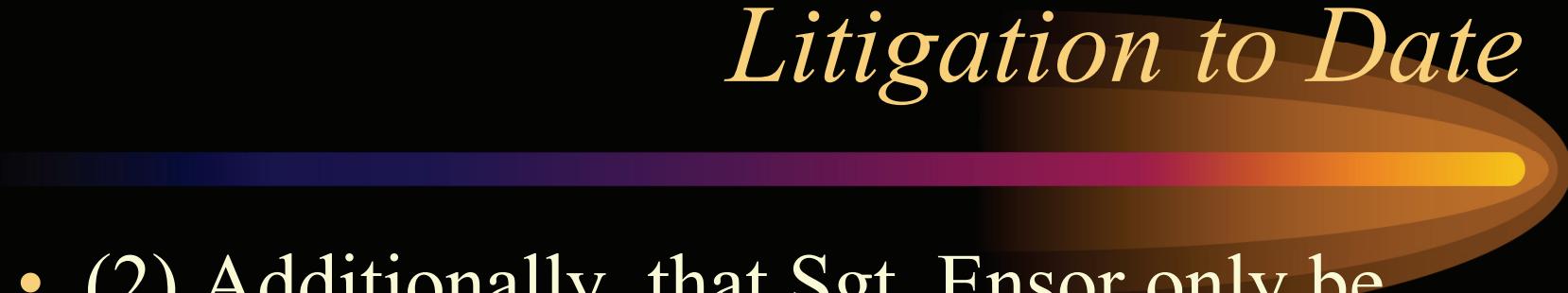
- Defense experts (forensics experts)
- NAS report
 - Learned Treatise
 - 803(8)

Litigation to Date



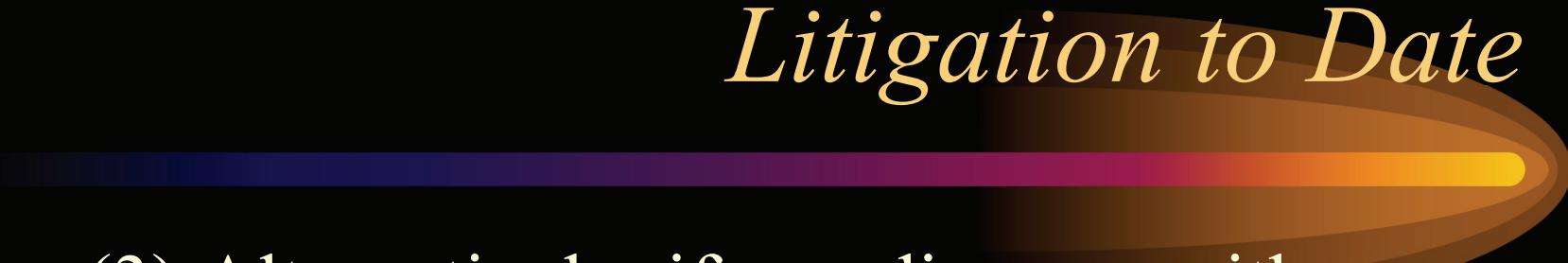
- I recommend:
- (1) That Sgt. Ensor not be allowed to opine that it is a "practical impossibility" for any other firearm to have fired the cartridges other than the common "unknown firearm" to which Sgt. Ensor attributes the cartridges;

Litigation to Date



- (2) Additionally, that Sgt. Ensor only be permitted to state his opinions and bases without any characterization as to degree of certainty (whether "more likely than not" or "to a reasonable degree of ballistic certainty");

Litigation to Date



- (3) Alternatively, if you disagree with Recommendation No. 2, that Sgt. Ensor only be allowed to express his opinions "more likely than not";

Litigation to Date



- (4) Alternatively, if you disagree with Recommendation Nos. 2 and 3, that Sgt. Ensor only be allowed to express his opinions "to a reasonable degree of ballistic or technical certainty" (or any other version of that standard).
- United States v. Mouzone, 2009 U.S. Dist. LEXIS 100718, 98-99 (D. Md. Oct. 29, 2009)

More Litigation



- Mr. Nichols will be permitted to give to the jury his expert opinion that there is a match between the .30-.30 caliber rifle recovered from the abandoned house and the bullet believed to have killed Mr. Chunn.

More Litigation



- [The expert will] not be permitted to testify that:
- his methodology allows him to reach this conclusion as a matter of scientific certainty.
- that he can conclude that there is a match to the exclusion, either practical or absolute, of all other guns.

More Litigation

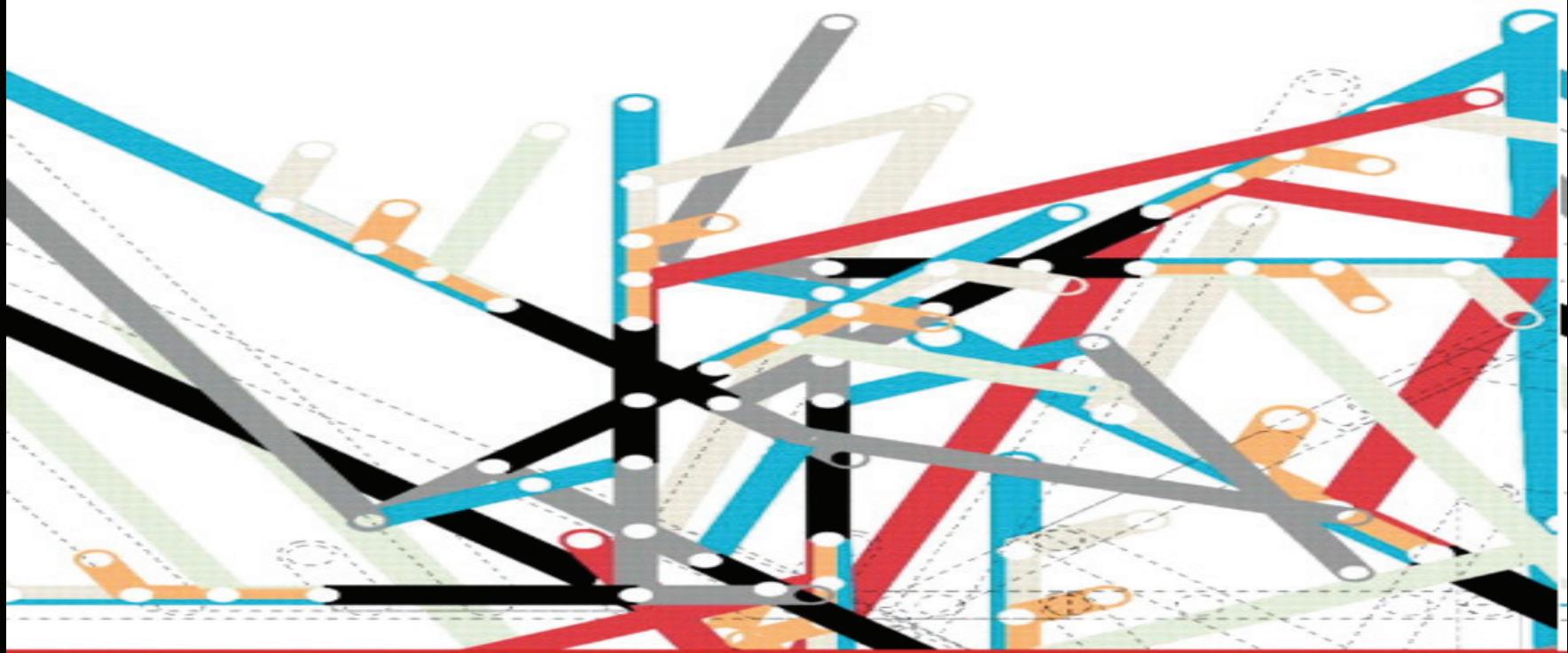


- He may only testify that, in his opinion, the bullet came from the suspect rifle to within a reasonable degree of certainty in the firearms examination field.

United States v. Taylor, 2009 U.S. Dist.
LEXIS 101072 (D.N.M. Oct. 9, 2009)

Moving Toward Probabilistic Proof

PROBABILISTIC SYSTEMS AND RANDOM SIGNALS



What Are Probabilistic Testimony Options?



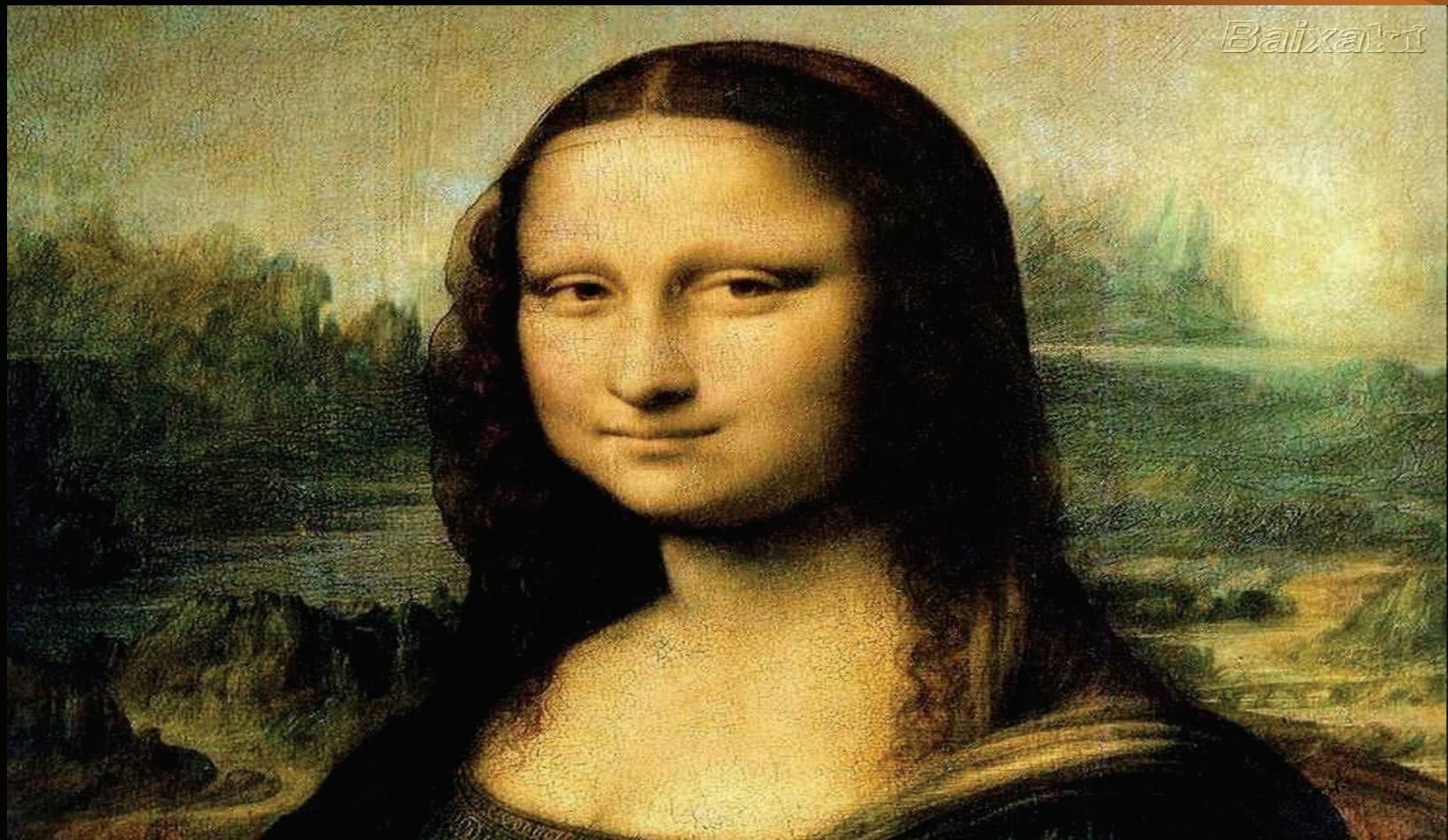
- It is more likely than not
- It is highly likely
- The random match probability is 1 in 387,929.

Is There a Foundational Basis?



- What are the data?
- What is the examiner's experiential basis for this conclusion?

The Mona Lisa Problem



The Mona Lisa Problem



- Without the probability assessment, the jury does not know what to make of the fact that the patterns match: the jury does not know whether the patterns are as common as pictures with two eyes, or as unique as the Mona Lisa.

United States v. Yee, 134 F.R.D. 161, 181
(N.D. Ohio 1990)

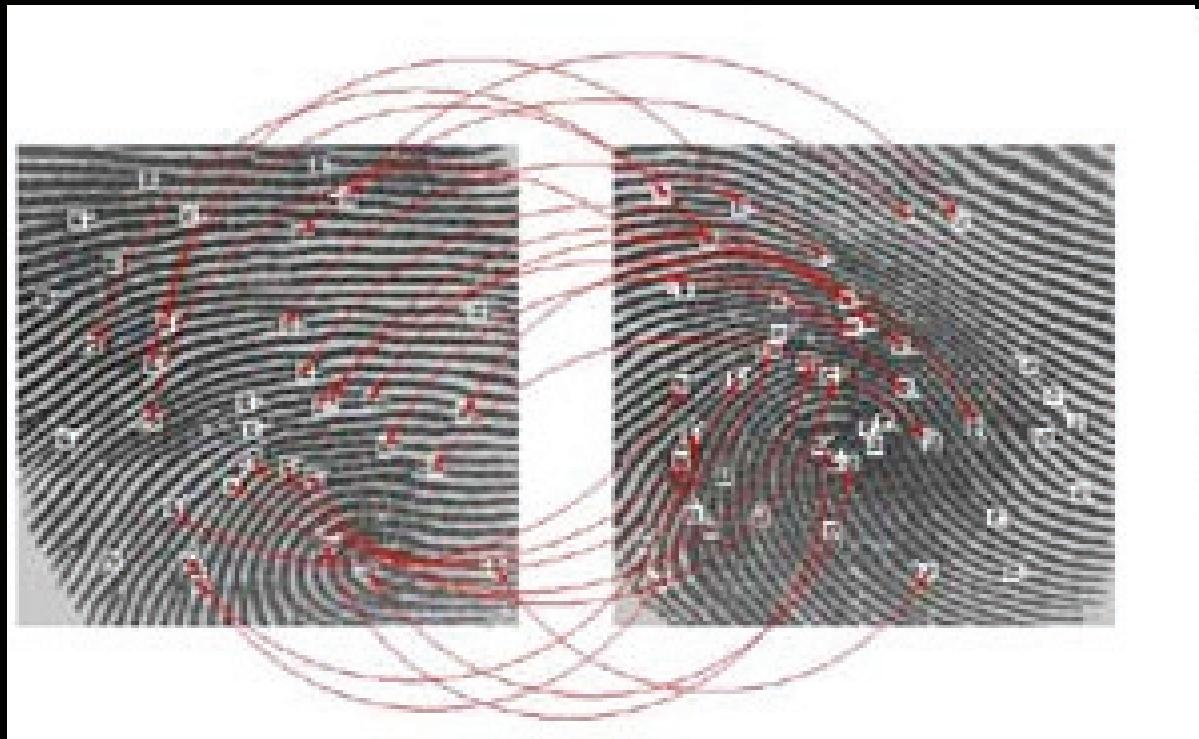
The Mona Lisa Problem

- Without rarity statistics, may a latent print examiner educate jurors to the significance of the various features of a print?



Prosecution Possibilities

- Jurors Get Visuals

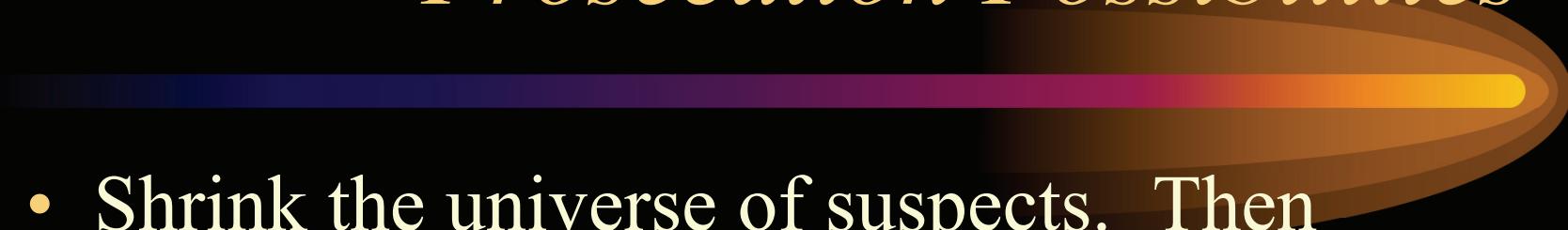


Prosecution Possibilities

- Show the other AFIS prints to demonstrate how distinctive the defendant's is.

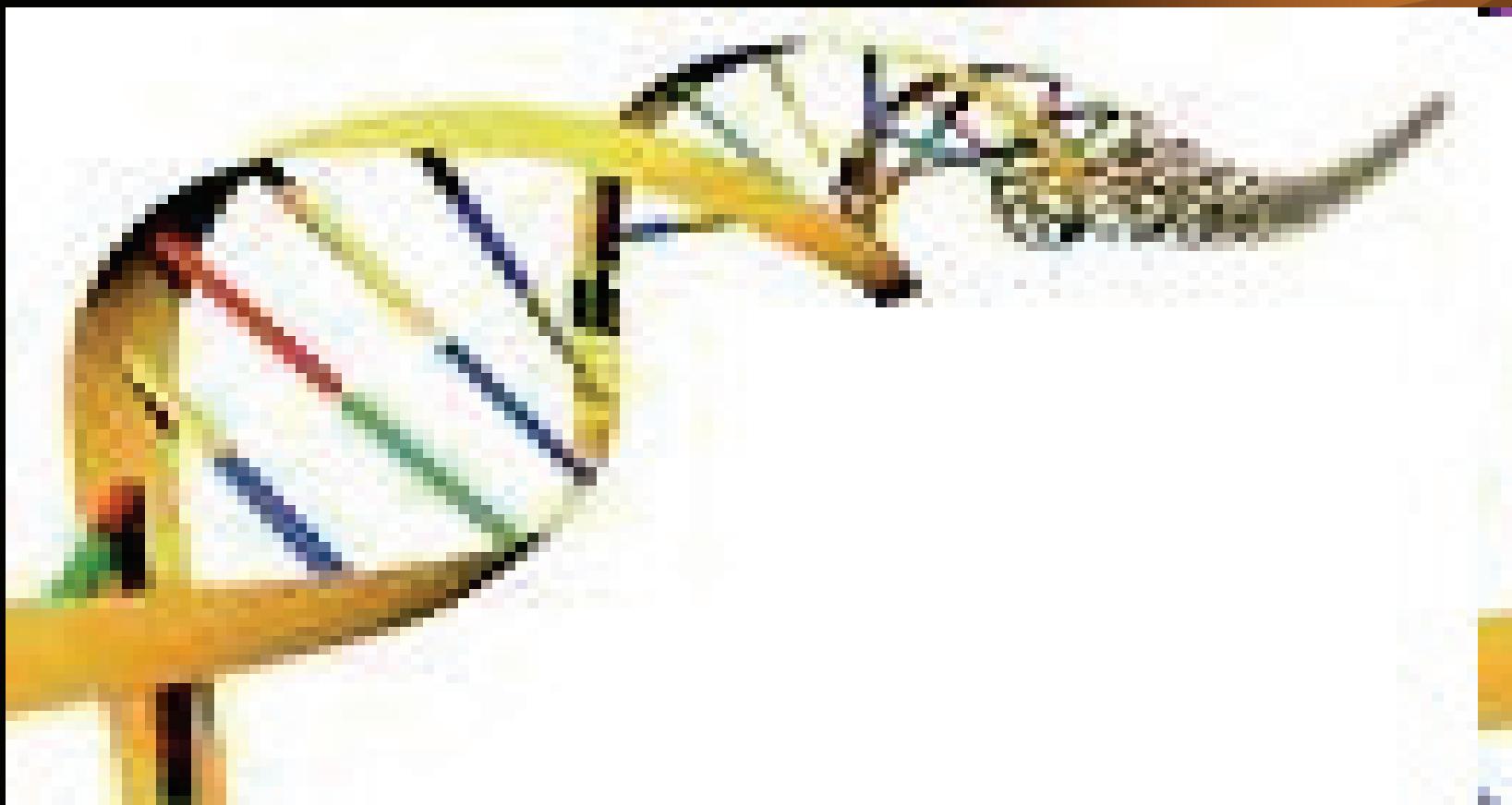


Prosecution Possibilities

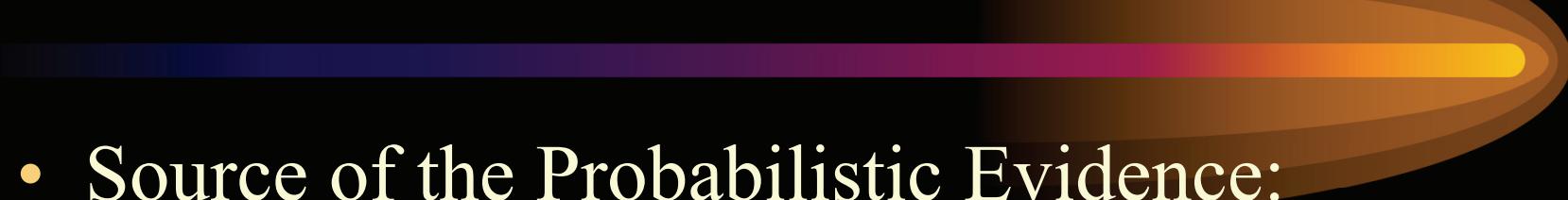


- Shrink the universe of suspects. Then probabilistics may not come in to play.
- “Only 3 people had access to the gun.”

Learning from DNA



Legal Issues Accompanying Probabilistic Testimony



- Source of the Probabilistic Evidence:
- “We compared the defendant’s prints, which were in the database, to 50,000 others.”
- Does “database” connote a criminal record?
- 404(b)?

Legal Issues Accompanying Probabilistic Testimony



- Low Random Match Numbers:
- Is this still relevance, or should it be excluded under 403?
- United States v. Graves, 465 F. Supp. 2d 450 (E.D. Pa. 2006)

Legal Issues Accompanying Probabilistic Testimony



- The prosecutor's fallacy occurs when the prosecutor elicits testimony that confuses source probability with random match probability. Put another way, a prosecutor errs when he "presents statistical evidence to suggest that the [DNA] evidence indicates the likelihood of the defendant's guilt rather than the odds of the evidence having been found in a randomly selected sample."

Legal Issues Accompanying Probabilistic Testimony

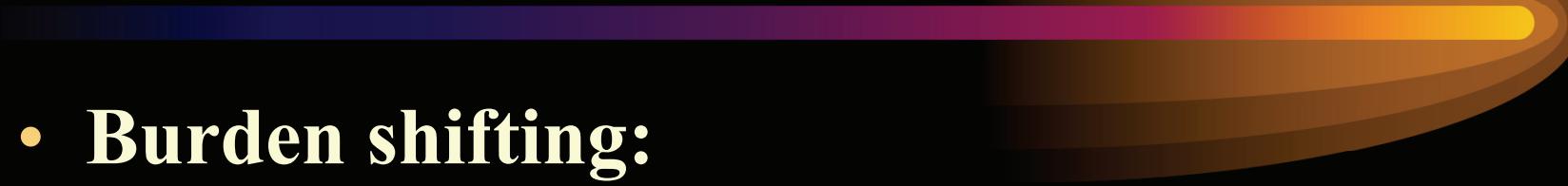
- To illustrate, suppose the . . . evidence establishes that there is a one in 10,000 chance of a random match. The jury might equate this likelihood with source probability by believing that there is a one in 10,000 chance that the evidentiary sample did not come from the defendant.
- Brown v. Farwell, 2008 U.S. App. LEXIS 15393 (9th Cir. Nev. July 21, 2008)

Legal Issues Accompanying Probabilistic Testimony



- Overstating what the statistics purport to show.
- CBLA: United States v. Mikos, 2003 U.S. Dist. LEXIS 22069 (N.D. Ill. Dec. 5, 2003)

Legal Issues Accompanying Probabilistic Testimony

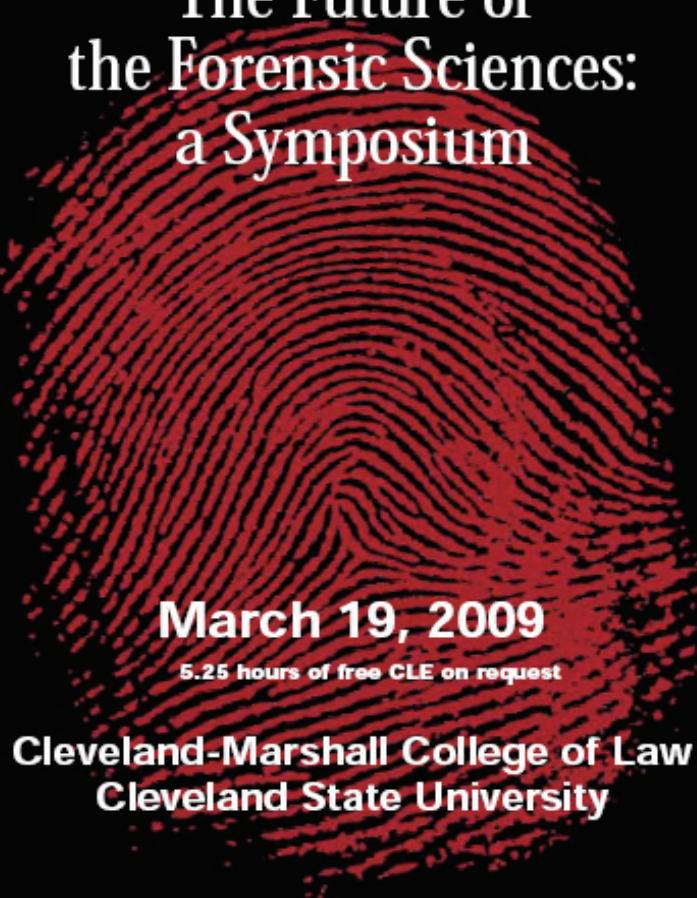


- Burden shifting:
- Adverse comment on failure of defendant to call an expert.
- Comment on defense having had the opportunity to test the evidence.

Resources

Criminal Justice Forum IV

The Future of the Forensic Sciences: a Symposium

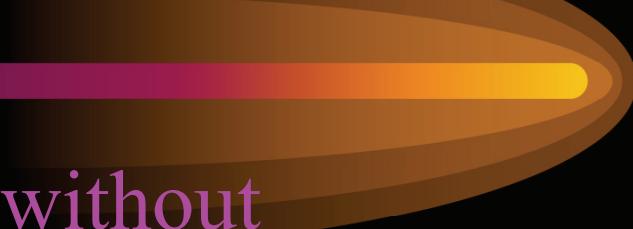


March 19, 2009

5.25 hours of free CLE on request

**Cleveland-Marshall College of Law
Cleveland State University**

Resources



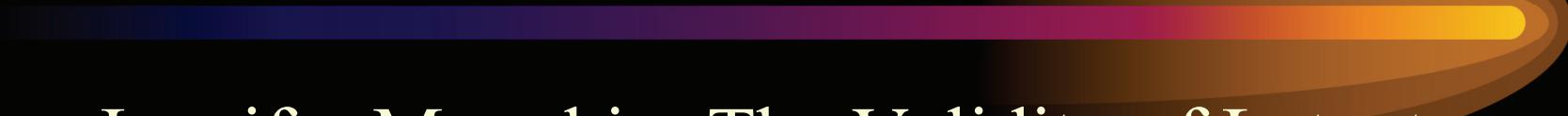
- Simon A. Cole, "Forensics without Uniqueness, Conclusions without Individualization: The New Epistemology of Forensic Identification," *Law, Probability and Risk*, Volume 8, Number 3 (2009).

Resources



- Simon A. Cole, “Out of the Daubert Fire and into the Fryeing Pan? Self-Validation, Meta-Expertise and the Admissibility of Latent Print Evidence in *Frye* Jurisdictions,” *Minnesota Journal of Law, Science & Technology*, Volume 9, Issue 2 (Spring 2008)

Resources



- Jennifer Mnookin, The Validity of Latent Fingerprint Identification: Confessions of a Fingerprinting Moderate, *7 Law, Probability and Risk* 127 (2008).

Resources



- Office of the Inspector General, **A Review of the FBI's Handling of the Brandon Mayfield Case**
- http://www.justice.gov/oig/special/s0601/PDF_list.htm